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Quality and Early Childhood Education and Care: A Policy Initiative for the 21st Century

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The expectation of quality early childhood education and care (ECEC) is that higher quality inputs will produce higher quality outcomes for children. There are many ways that outcomes may be expressed and measured, though current procedures emphasize threshold quality. However, threshold quality is essentially an entry-level concept – once the entry requirements are met, quality is assumed to have been attained and subsequently sustained. A more sophisticated, comprehensive procedure is needed. For more than a decade ECEC policy in Australia has been generally weak, fragmented and dominated by matters related to quantity (market issues) rather than quality (pedagogical issues), despite the rhetoric. What should be measured to identify quality in ECEC settings? What should a quality directed ECEC policy emphasize? This paper addresses significant issues in determining and measuring quality for a comprehensive ECEC policy and the links to a rating system in Australia.

Key words : **q**uality measure, early childhood education and care (ECEC), quality rating system (QRS)

Introduction

The issue of quality in early childhood education and care (ECEC) has become a matter of significant concern in many countries in recent years (OECD, 2006). Within those countries with a well-developed, or developing, ECEC system, the past decade has witnessed a range of reviews, public policy, inquiries and research into what should constitute quality in ECEC (OECD, 2006). Typical of this phenomenon is Australia. Over the past decade and a half Australia has witnessed the rapid growth of ECEC provision (Elliot, 2006), but with a change in Commonwealth Government after the election in late 2007 a commitment was made to a higher-level of national quality across all types of ECEC services (Australian Government, 2008).

From many subsequent policy developments a key initiative for improving the quality of ECEC provision is the Council of Australian Government: COAG (2009) initiated National Quality Standard (NQS), implemented progressively from July 2010 across all Long Day Care (LDC) centres, Family Day Care (FDC) centres, Outside School Hours

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Care (OSHC) and preschools from 1st January 2012. The new NQS addresses standardised minimum staff-to-child ratios, workforce qualifications and includes a rating system that ranks ECEC services according to their quality. Under a more transparent system agenda, the results of ratings are to be publicly available.

Before this initiative in ECEC policy is considered, it is essential to address the issues associated with quality in early childhood education and care. What constructs make up and define quality in programs? Once this is established how do we measure quality in a program and at a systemic level? How is high quality in a program delineated? What is the link between quality indicators and child outcomes? These questions are significant as they address fundamental policy issues in ECEC and the consequential impact of those policies on parents, children and the ECEC sector.

What is quality ECEC?

Quality in ECEC is an elusive concept, much discussed and debated in research papers over time, yet without agreement (Burchinal & Cryer, 2003; Dahlberg, Moss, & Pence, 1999; Fleer & Kennedy, 2006; Ishimine, 2009; Mooney et al., 2003; Moss, 1994; NICHD Early Child Care Research Network, 2002; Raban, 2000; Sylva, Siraj-Blatchford, & Taggart, 2003). Sylva et al. (2003), for example, argue that "quality is not a universal concept but depends on national curricula and cultural priorities" (p.46) and therefore is contextually dependent. Similarly, Mooney et al. (2003) contend that "definitional issues and differences in government structures, welfare systems, policies and practices make it difficult to compare the quality of provision cross-nationally" (p.5). In addition, Dahlberg et al., (1999) "understood quality to be a subjective, value-based, relative and dynamic concept, with the possibility of multiple perspectives or understandings of what quality is" (p.5). In summary, these researchers argue that there is no globally accepted definition of quality in ECEC, though a degree of consensus does exist and there have subsequently been advances in the publication of global standards for early childhood learning and development (Britto & Kagan, 2010, Scott-Little, 2010)

There is a broad acceptance that quality in ECEC centres can be addressed through examining two common categories or types - structure and process (Howes et al., 2008; Ishimine, Tayler, & Thorpe, 2009). Generally, structural quality refers to centre facilities/resources, staff-to-child ratios and staff qualifications that are more easily measurable for cross-sectional observation purposes in determining quality. (Howes et al., 2008; Ishimine et al., 2009; OECD, 2006). These components are largely controlled by forces outside the ECEC setting such as government financing, education and health policies which set requirements before an ECEC site can commence.

Process quality, however, focuses on the nature of interactions between the child and teacher, child and child, teacher and parent, teacher and teacher, as well as the nature of centre leadership and teacher pedagogical skills. Process components influence the everyday nature of ECEC settings and they directly influence the quality of a child's day-to-day experience. Such components are more constructive in nature and require more in-depth observations than structural quality.

In a major study of ECEC, the OECD (2006) identified seven aspects of quality - (1) interaction or process quality, (2) child-outcome quality, (3) standards pertaining to parent/community outreach and involvement, (4) orientation quality, (5) structural quality, (6) educational concept and practice and (7) operational quality – these can be reconfigured within the two types of quality. Broadly from (1) to (3) are process quality, while from (4) to (7) are categorised as structural quality.

In thinking toward measurement of quality there is a dilemma, however, as the elements of ECEC curricula cannot be classified easily by type or it may be argued, are related to both structure and process. In part this is because the curriculum in ECEC contexts is vaguely defined, compared with school sectors, in part because of its nature. The curriculum, defined as the planned learning opportunities for children, reaches across the two types of quality, like an umbrella. Both structural and process aspects are influenced by what teachers/staff plan and how they enact the curriculum in the moment. Our model (see Figure 1) shows the relationships between curriculum and the two types of quality in an ECEC context. The two types of quality and curriculum influence each other and are essential elements to construct overall quality in ECEC settings. Structural components, such as staff: child ratios, group size, staff qualifications, physical resources all influence the way the curriculum may be conceptualised and applied in ECEC settings. Process quality and curriculum are interdependent as seen in the case of pedagogy which is essential to curriculum yet also powerfully affects process quality. A change in pedagogy within the curriculum (e.g. a new method for managing behaviour, giving feedback or teaching reading) will affect the process quality of a centre. Similarly the pedagogical approach of a centre (e.g. more free-play oriented, more academic skills focused) will influence how the curriculum is conceptualised.

Internationally, the NICHD Early Child Care Research Network (2002) found that process quality had a direct impact on child outcomes, whereas structural indicators of quality had an indirect impact through process quality. Our model emphasises this finding, indicating that structural quality enhances process quality, which then directly influences overall quality. Structural components also have an indirect impact on child outcomes by providing the basis for an enhanced learning environment. For example, smaller group sizes and more qualified staff should improve the quality of the learning environment and thereby child outcomes. From this model, curriculum influences the overall quality significantly. Yet, it has long been undervalued and underestimated in ECEC contexts.

Why measure quality?

There are several significant reasons for measuring quality in ECEC settings. The first is to ensure that ECEC provision meets and maintains national standards for children and their families. In Australia, QIAS created threshold standards so that measuring quality determines if these thresholds are maintained.

QIAS information about individual LDC centres are presented on the NCAC website so that parents can access information to inform their choice of LDC centre. However, the OECD (2006) argued

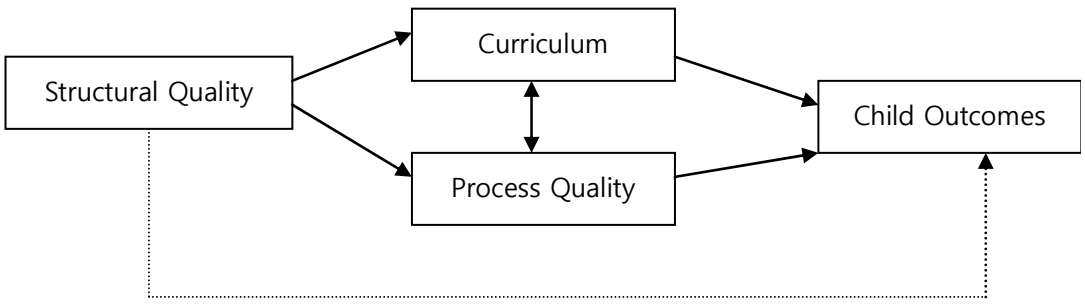

Figure 1. Model of relationship between curriculum and quality

that in Australia a large number of parents were not utilizing the web information effectively, largely because either parents did not have enough knowledge about NCAC or they had insufficient time for actively pursuing the NCAC data (OECD, 2006). Paradoxically, the QIAS information is brief and was designed to support parental understanding of LDC centres that their children attend.

A third reason is to engage and ensure that LDC centres consistently address issues of quality improvement. In most cases this is linked with staff on-going professional development. However, there is a flaw as the self-report process does not provide enough critical feedback. In addition, a clear definition of quality is needed to provide a useful idea of what quality means and the basis for a professional development program. This should be research-based rather than ideologically argued.

Fourth, quality should be measured in ECEC settings as a means to provide recognition and acknowledgement for the work of centres and teachers who provide an improved education and care. The idea of incentives is significant to quality as it can be an effective way to improve outcomes as well as recognize and acknowledge greater effort. An incentive can be either intrinsic (interest and enjoyment of the work) or extrinsic (financial reward), or both. However, the effect of incentives on public policy is complex and Le Grand (2003) has argued that there might be different effects of the financial reward and public service between above and below thresholds.

Finally, considerable research has shown that children who attended high quality childcare centres demonstrated higher academic and social achievement than children who attended low quality centres (e.g., Early et al., 2007; Dearing, McCartney, & Taylor, 2009; Ishimine, 2009; Mashburn et al., 2008; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2004). From such research evidence, it is clear that quality is significant in ensuring improvement of children's overall development. Therefore, measuring quality is necessary to ensure all children have a good start in life and to maximise their potential development. Quality and its measurement requires clear policy from government.

Quality policy in Australian ECEC

Prior to the early 1970s, childcare was considered to be primarily a family responsibility (Wangmann, 1995). However, in the early 1970s, dramatic shifts occurred in childcare reflecting changed family structures as social and economic equity for women became more commonplace (Brennan, 1983, Greenblat & Ochiltree, 1993, Ochiltree & Edgar, 1995). Consequently the notion of centre-based childcare has changed significantly from a purely 'family matter' to societal participation (Wangmann, 1995).

In the 1980s centre-based childcare became an increasingly significant public issue as women increasingly participated in the workforce to both seek financial independence and to pursue professional and job equality. Moreover, Wangmann (1995) viewed this significant shift as freeing women from traditional social pressures, where centre-based childcare was not seen as a withdrawal of mother's responsibility. Since then, non-parental home-based and centre-based childcare has become more accepted and regarded in Australian society. At the same time, the Australian government accepted responsibility to develop policy addressing the provision of non-parental childcare. By the late 1980's, childcare policy in terms of licensing and regulation was established in the state/territory governments independent from the Commonwealth government. For example, in 1989, the New South Wales government released centre-based childcare regulations. However, state/territory governments lacked the resources to build strong policy. This produced an unintended consequence evident in

the current inconsistent regulatory system across Australia and has raised serious problems at the national ECEC policy in recent years.

The policy development period of the 1980s was primarily associated with social and economic objectives for childcare provision rather than on enhancing positive child developmental outcomes. The Commonwealth government viewed centre-based childcare as part of national economic growth and stimulation (Wangmann, 1995), because flexible and affordable centre-based childcare enabled parents to participate in employment opportunity and to contribute to overall national economic growth. However, the 'quality' of childcare provision became a central attention for working parents and attracted societal and political interests. In 1993, the Commonwealth government linked its financial commitment to children's services to a quality assurance system called the Quality Improvement and Accreditation System (QIAS) for LDC centres to improve the quality of provision in Australia.

While the QIAS was originally introduced with the aim of improving quality standards for long day care centres, it expanded its reach to family day care and outside school hours care services and was, as well, an administrative pathway for subsidising parental childcare costs through the financial incentive of the Child Care Benefit. In this way the QIAS became a powerful tool for demonstrating quality status without reviewing what quality actually meant in an Australian context. Consequently, the tension between 'threshold' quality (i.e., state licensing) and an 'improvement' agenda has remained.

Measuring ECEC quality in Australia

Quality may be measured in many ways, but commonly a threshold approach is employed which maintains a minimum national standard, based on legislation and linked to licensing criteria. In Australia, the national quality accreditation system, called the Quality Improvement and Accreditation System (QIAS) for long day care centres[1], conducted by the National Childcare Accreditation Council (NCAC), has contributed nationally to raising quality standards by requiring minimum entry standards. Although the QIAS does not provide a clear definition of quality, there are seven areas to measure before approval is given: (1) staff relationship with children and peers, (2) partnerships with families, (3) programming and evaluation, (4) children's experiences and learning, (5) protective care and safety, (6) health, nutrition and wellbeing and (7) administration procedures to support quality (NCAC, 2006). In a self-report process, centres must address all seven areas in order to achieve accreditation through QIAS. This has had the effect of improving the quality of long day care centres as participation in this process has achieved an accreditation rate of 92% (NCAC, 2009).

In the early 1990s, due to the rapidly increasing demand for ECEC sectors in Australia, particularly long day care centres, more attention was paid to the quality of these services (OECD, 2001). Introduced in 1993 nationally, the QIAS was adopted with the system acknowledged as an indicator of quality for Long Day Care (LDC) centres in Australia. Importantly participation in the Quality Improvement and Accreditation System (QIAS) is required for centres to access funds from the Child Care Benefit (CCB) scheme that financially supports parents, enabling more affordable care. This process has been a powerful incentive for LDC centres to participate. Non-accreditation denies parents access the Child Care Benefit scheme. Consequently, this system became increasingly important in maintaining minimal national standards of quality and is often used as a measure by parents to choose a long day care centre for their children.

There are, however, many fundamental flaws with the QIAS and its application. A key concern is that the definition of quality is vague thereby

providing a weak base for the seven identified areas of quality. The curriculum is also undervalued and essentially not assessed. Third, the system needs a stronger research base in order to function as a valid and reliable indicator of quality (Elliott, 2004; Ishimine et al., 2009). Further, a reliance on self-reported items in the accreditation process raises questions about the veracity of centre quality. Finally, even though a long day care centre may receive a high score (percentage) from QIAS, it does not necessarily translate to high quality, compared with other measures. The QIAS is designed for a threshold approach and 'scores' beyond the threshold are essentially meaningless.

However, recently the COAG (2009) announced that, between 1st July 2010 and 31st December 2011, a new quality assessment process and quality ratings is being trialled jointly by the NCAC and state and territory regulatory agencies. A new assessment process is in place in trial form from July 2010 as precursor to a new national rating system for LDC centres. What is unknown is how the process will change from the QIAS process, what the responsibilities are of the national body for authorising the new Quality Standard System, and how the assessment process will operate. Such systemic change poses a critical transition time for ECEC field. To enhance child outcomes such change needs to be built on research knowledge over politically driven decision-making.

Is QIAS an appropriate measure for a quality in Australia?

For many the existing Australian national quality assurance measurement – Quality Improvement and Accreditation System (QIAS) - is highly problematic (Rush, 2006; Fenech, Sumsion, & Goodfellow, 2008; Ishimine, et al., 2009). Why is QIAS unsuitable as a measure of quality in ECEC? The evidence indicates four key reasons. First, the QIAS uses several ambiguous terms in the indicators upon which judgements are made (e.g., 'many', 'most', & 'appropriately'). What do these terms mean? These words can be interpreted quite differently by individuals, potentially producing low inter-rater reliability (Ishimine et al., 2009) and problematic assessments of 'quality'.

Second, within the seven quality areas identified in QIAS, five quality areas rely on staff self-report. Although the QIAS validation process is conducted through an observation by independent trained validators, some of the indicators are not directly observable. They require information from staff to form an assessment, the data being self-report by staff. However, self-reports can be unreliable, even invalid, and consequently cause biased results as staff, for example are likely to answer in favour of the centre.

Third, substantial United States research (Early et al., 2007; Mashburn et al., 2008) confirms the importance of process quality as having greater impact than structural quality on children's overall development. However, in the QIAS only two quality areas (i.e., staff relationships with children and peers & children's experiences and learning) out of seven are focused on actual day-to-day experiences between teachers and children. Yet the quality areas are weighted equally, so proportionally, the QIAS provides significantly less emphasis on process quality than structural quality. Furthermore, with QIAS there are insufficient mechanisms for assessing the quality of pedagogy, so process quality is further diminished.

Finally, the QIAS does not report inter-rater reliability information. According to the NCAC (2006), validators are trained, however, without reporting inter-rater reliability data, rendering the QIAS unable to verify that instruments are used reliably. Further, results are reported only at the centre-level. This does not indicate whether variation between rooms within individual centres poses problems in relation to the overall statements about the quality of a centre.

New policy directions for Australia: A national ECEC strategy

Although education and childcare are constitutional domains of the states, the Australian Government has made a major commitment to implementing new initiatives for improving the life opportunities of all Australian children (DEEWR 2009c). A focus of this commitment is improving quality in the ECEC sector, as well as access and affordability of ECEC for all children in Australia. Key agendas for these initiatives include access to quality early childhood education for all children, lifting quality in ECEC, closing the gap for indigenous children, helping Australians balance work and family commitments, improving affordability of child care, improving child and family health, supporting vulnerable children and helping children with disabilities (DEEWR, 2009c).

The Council of Australian Governments (COAG) developed a nationally-agreed early childhood development strategy. Released in July 2009 (DEEWR, 2009e), the strategy provides a national, comprehensive approach to establishing the best ECEC system available in Australia. COAG has committed to ensuring children's health, social inclusion, educational opportunities and quality ECEC services. To meet these goals, the Australian government introduced a national quality agenda (DEEWR, 2008, 2009a, 2009b) including an Early Years Learning Framework – Being, Becoming and Belonging (released in July 2009), a quality rating system, enhanced regulatory arrangements and a national quality standard which includes an increase in the number of qualified early childhood workers for all states and territories (DEEWR, 2009e). Currently the National Quality Standards (NQS), including a new quality rating system, are in the early stages of the implementing process. The speed and thoroughness of that implementation will depend on political decisions, as well as available finances, as the NQS is resource intensive. However, the political will to implement the NQS appears considerable, as evidenced by the number and range of recent developments above, leading therefore to they key question – how can quality in ECEC be measured effectively?

A proposed quality rating system in Australia

As identified above the existing QIAS has demonstrated substantial limitations, particularly related to effective rating of quality dimensions. A key component of a new National Quality System in ECEC is an effective quality rating system (QRS). For DEEWR (2009d), its primary goal is "to provide useful information to families enabling them to assess the quality of their child care service and make informed choices when selecting an early childhood education and care service for their child or children" (2009d). In a discussion paper DEEWR (2008) identified three goals for a quality rating system – indication of service quality, encouragement of continuous improvement and information for families and the community. The proposed design is a five level rating system - Unsatisfactory, Operating requirements, National quality standard, High quality and Excellent (2009f). In the policy overview document DEEWR (2009f) argued "it is proposed that services will receive an overall rating and one of five possible ratings for each of the seven quality areas, which would give them a quality profile" (p. 4). In addition, DEEWR (2009e) clarified that it is proposed that "each level will be defined by a set of criteria, including quantitative and qualitative assessment by an external assessor on key areas" (p. 29). At this stage, the quality rating system is in the developmental phase with piloting on draft documents continuing.

Although a neophyte system, there are overriding issues that typically challenge efforts toward significant change. For example, the intended labelling system could produce unintended consequences with negative impacts for families and centres. The cost of childcare is

thought to be continually problematic for Australian families. If the new rating system produces highly rated ECEC centres, these may increase their fees to 'maintain' that quality. Further, the new rating system is not clearly articulated around a strong theoretical framework in combination with a research base. COAG (2009) announced that the new quality assessment process is to be based on seven quality areas: (1) Educational program and practice, (2) Children's health and safety, (3) Physical environment, (4) Staffing arrangement, (5) Relationships with children, (6) Collaborative partnerships with families and communities, (7) Leadership and service management. However, the theoretical constructs that underpin these areas to support child outcomes are not clear; hence there is risk of sustaining a "politically driven threshold approach" rather than moving to a stronger research constructed approach. For example, as process quality directly influences child outcomes it needs greater weight in an assessment tool. The observation process of quality judgement is as yet unclear. In addition, the curriculum framework relates loosely to the quality areas poorly representing links between quality indicators. For example, the Early Years Learning Framework does not indicate the relationship between what the curriculum should offer and indicators of quality. Furthermore, there are other potential problems which are not articulated, including the public consultation process, as well as the level of reliability and validity of the measures. If the problems of QIAS are not addressed and if a similar approach is utilized within a new system, the quality rating system will produce unreliable ratings. The issue of effective measurement is central to the proposed quality rating system.

Measures of quality

How could quality be measured in ECEC? There is a well-established and recognized measurement tool in the United States designed to assesses ECEC quality. In 1980, in North Carolina Harms and Clifford (1980) published the first form of the *Early Childhood Environmental Rating Scale: ECERS* to assess seven aspects of the ECEC environment. ECERS is known as a comprehensive measure of quality addressing seven factors – (1) space and furnishings, (2) personal care routine, (3) language reasoning, (4) activities, (5) interaction, (6) program structure, and (7) parents and staff. The ECERS has been used in many studies internationally to measure ECEC quality including Singapore (Kwan, Sylva, & Reeves, 1998), Sweden (Andersson, 1999; Sheridan & Samuelsson, 2001); the US (e.g., Burchinal & Cryer, 2003; Cassidy, Hestenes, Hegde, Hestenes, & Mims, 2005; Montes, Hightower, Brugger, & Moustafa, 2005; NICHID Early Child Care Research Network, 2002), England (Sylva et al., 2004), Canada (Goelman et al., 2006), Germany (Kuger & Rossbach, 2007) and Australia (Ishimine, 2009). Meanwhile, ECERS has been revised and published as an updated version: the *Early Childhood Environment Rating Scale- Revised Edition: ECERS-R* (Harms, Cllifford, & Cryer, 2005). Consequently ECERS and ECERS-R are established measures of quality – mostly, but not exclusively in English-speaking countries - applicable in a wide range of ECEC contexts (e.g., centre-based childcare, pre-schools & playgroup) for classrooms with children who are from two and half years to five years old.

ECEC quality has received much attention as international researchers show greater interest in the effects of ECEC quality on children's developmental outcomes. A result of this increased attention has given ECERS, and subsequently ECERS-R, the reputation as a valuable measure of overall quality and has become a reference criterion for measuring the quality of early childhood services in the U.S. First introduced in 1999 in the state of Colorado, some 18 states currently use a form of QRS (quality rating system) at a state-

wide level (NCCIC, 2009). Alternatively some communities have implemented a QRS at a local level, such as Palm Beach County in Florida and Los Angeles County in California (Mitchell, 2005). In almost all states (except Montana & Vermont) there is some use of environmental scales including ECERS-R.

An evaluation study, conducted and reported by RAND (Zellman, Perlman, Le, & Setodji, 2008), examined 65 childcare centres to assess their quality using ECERS-R. A key finding was the poor relationship between star ratings and measures of staff-child interaction, meaning that the star rating approach did not reflect process quality effectively. Moreover, there were no relationships between star ratings and child outcomes (Zellman et al, 2008). These findings raise the question of what kind of quality rating reform is necessary to the design and validation process. Importantly how might definitions of quality be reconstructed in light of research findings?

Answers to these questions may also be found in other forms of quality assessment. The *Classroom Assessment Scoring System* (CLASS) has published a measure that assesses classroom quality in ECEC settings (Pianta, La Paro, & Hamre, 2008). It consists of three domains – Emotional support, Classroom organization and Instructional support. Under these domains, there are 11 dimensions (1), positive climate, (2) negative climate, (3) teacher sensitivity, (4) regard for student perspectives, (5) behaviour management, (6) productivity, (7) instructional learning formats, (8) concept development, (9) quality feedback, (10) language modelling, and (11) literacy focus. The CLASS primarily focuses on teacher-child interaction using these eleven teaching angles to capture process quality comprehensively. There is little emphasis on structural quality and curriculum focus, however this is one of a few measures where process quality is captured sufficiently and systematically.

In the late 80's, Arnett (1989) released the Caregiver Interaction Scale (CLS) to assess a global rating of caregiver/teacher sensitivity and responsiveness in ECEC settings and home environment. The measure focuses on caregiver/teacher emotional interactional levels, such as sensitivity, harshness, detachment, permissiveness. Items are rated on a 4-point Likert scale, though the scale has limitations as it captures only one aspect of process quality, and therefore needs to be supplemented by other measures which have more structural dimensions to assess global quality accurately.

There are some other, lesser known measurements to assess quality in ECEC settings internationally. For example, the Assessment Profile for Early Childhood Program (APECP) was developed by Abbot-Shinn and Sibley in 1992 in the United States to define a global measure of quality. This measure was designed to capture both structural and process qualities, however the latter receives considerably less emphasis. The measure includes a curriculum dimension, though the use of dichotomous items limits the in-depth understanding of quality.

Despite these measures to assess quality in ECEC settings, and partly because of them, no measure has been developed in Australia which assesses a full range of quality dimensions in ECEC settings. There is clearly a need to develop an Australian measure that sufficiently assesses all dimensions of quality ECEC settings.

Considerations for a quality rating system in Australia

Given the alternatives what is a suitable approach to measuring ECEC quality in Australia? There is opportunity to develop a comprehensive measure of quality that is at once unique and appropriate for programs implementing the Early Years Learning Framework (EYLF). The measure should have a strong theoretical and research base

to make the system work effectively. Consideration of a quality rating system at this time would enable Australia to benefit from previous applications in US contexts, by learning their limitations. The QIAS can be used for a threshold, yet there is desire to achieve beyond the QIAS and raise the bar for higher quality.

A main consideration at this time is the issue of measurement. The credibility of ratings applied across a system is dependent on the reliability and validity of the measurement. It is important to develop a purposeful measure particularly for a quality rating system built from research and appropriate to Australian ECEC centres, as Snow and Van Hemel (2008) have strongly argued. To achieve sound, reliable measurement there is also need for a clear and accepted definition of program quality and high quality in Australian contexts. As noted, "quality is not a universal concept" (Sylva et al., 2003, p.46), therefore, it is important to have a definition of quality that reflects the Early Years Learning Framework (EYLF): Being, Becoming and Belonging in Australia.

What then should an Australian QRS focus on in terms of measurement? Given the inadequacies of the QIAS identified above a new approach needs to take greater account of process quality to capture more breadth and depth on pedagogical components within ECEC settings.

A useful approach would be to consider CLASS (Pianta et al., 2008), the American designed approach for measuring quality in ECEC pedagogy such as teacher-child interactions in the classroom. The CLASS has much greater emphasis on measuring process quality effectively as it is uses a highly systematic observation approach with inter-rater reliability which is checked rigorously through an established master code on DVD. This measure has become very popular in research as well as professional development in the United States as well as internationally. However, for international use, the master code is developed only for use in American ECEC contexts and has not been validated in other international ECEC contexts nor other ECEC settings (e.g., Playgroup, Family Day Care). While this is problematic for use as it is in Australia it also provides an opportunity for creating a measure which can sufficiently measure Australian ECEC contexts.

An important challenge is to develop a means of reliably rating process quality - the quality of pedagogy - in ECEC settings. Research suggests (Early et al., 2007; Mashburn et al., 2008), that compared with the impact of process quality, the effects of structural quality is negligible on children's overall academic and social outcomes, although this research has been highly criticised. Barnett and Ackerman (2007) argued that structural quality as inputs (i.e., teachers' qualifications, group size, staff-child ratios, length of ECEC program) is highly significant and these factors will play a mediating role in enhancing process quality. So structural quality is important in considerations of measuring quality especially to maximize the quality of pedagogy.

Moreover, given the RAND evaluation study, star ratings are not generally linked with teacher-child interactions, a fundamental of process quality. In a new Australian quality rating system, the measurement of interactions is central to the assessment of process quality, which is known to improve children's outcomes. Finally, a culture of quality assessment that retains incentive for settings to achieve a high quality of provision is likely to advance children's development and learning outcomes. Whether a quality rating system is compulsory or not, the system needs to have a clear incentive for ECEC centres, or even individual staff/teachers, to achieve high quality programs. Further a rating system that supplies clear written feedback for future improvement and tangible mechanisms for staff development may support continuous progress and acknowledge centres for their effort toward the continuous

improvement of quality.

Conclusion

Identifying the most appropriate measures of quality, whether a rating system or not, is a long-term investigation and ECEC needs an accurate and solid system to improve the outcomes for the youngest Australians. Discussion about a rating system in Australia has barely begun. A steady, non-hasty approach developed on solidly built evidence over time is necessary for a rating system to be both an advance and effective.

The quality rating system might not only give an indicator of quality (stars; numbers; letters), but it should provide useful and meaningful feedback to the ECEC centres and teachers as well as to families. In this way, the indicators may not generate inaccurate impressions among families and the community. Importantly, the relationship between quality assessment processes and the theory behind quality needs to be clarified. Historically, the QIAS was a substantial development in support of the Australian ECEC system; however it did not achieve the necessary depth in determining quality beyond a minimal threshold. This was largely due to the lack of a research base when QIAS was developed. What Australia needs is a means to raise the bar to achieve high quality ECEC.

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Notes

[1] The ECEC sectors in Australia includes "diverse range of services for children from birth to 12 years of age" (DEEWR, 2009e, p. 2), such as Long Day Care (LDC) centres, Family Day Care (FDC), Outside School Hours Care (OSHC), Preschool and Occasional Care. These services are operating to serve different needs and under regulations. In this article, only Long Day Care centre, which is a centre-based non-parental childcare services which children who are aged birth to six years old and who attend a regular basis, is a focus on the main argument.